Chapter 1
Introduction

This Environmental Impact Statement/Environmental Impact Report (EIS/EIR) addresses alternative methods for implementing the Environmental Water Account (EWA).

The August 28, 2000, CALFED Programmatic Record of Decision (CALFED ROD; CALFED 2000b) for the CALFED Bay-Delta Program Programmatic Environmental Impact Statement/Environmental Impact Report (CALFED PEIS/EIR; CALFED 2000a) described an EWA as a 4-year program that could be extended by written agreement of the participating agencies. The CALFED ROD (Appendix A to this document) identifies the EWA as a cooperative water management program, the purpose of which is to provide protection to at-risk native fish species of the San Francisco Bay/Sacramento-San Joaquin River Delta estuary, while improving water supply reliability for water users. The CALFED ROD described the EWA actions involving the development and management of alternative sources of water supply, called "EWA assets," to address the CALFED agencies' water supply reliability and ecosystem quality objectives.

The EWA program makes environmentally beneficial changes in the operations of the State Water Project (SWP) and the Federal Central Valley Project (CVP), at no uncompensated water loss to the CVP and SWP (jointly referred to as the "Projects") water users. Protective actions for at-risk native fish species would range from reducing Delta export pumping to augmenting instream flows and Delta outflows. Beneficial changes in SWP and CVP operations could include changing the timing of some flow releases from storage and the timing of water exports from the Delta pumping plants to coincide with periods of greater or lesser vulnerability of various fish species to environmental conditions in the Delta. For example, the EWA might alter the timing of water diversions from the Delta and carry out water transfers in order to reduce fish entrainment at the pumps and provide migratory cues for specific anadromous fish species. The CALFED ROD states that an EWA program would replace any regular water supply interrupted by the environmentally beneficial changes to SWP and CVP operations. The timing of the protective actions and operational changes would vary from year to year, depending on many factors such as hydrology and real-time monitoring that indicates fish presence at the pumps.

The EWA program (CALFED 2000c; Appendix C) obtains its water assets by acquiring, banking, transferring, or borrowing water and then arranging for its conveyance. Water would be acquired substantially through voluntary purchases in the water transfer market or by developing additional assets over time. The EWA program also obtains water through operational flexibility of Delta facilities. Figure 1-1 illustrates the statewide area that could participate in, or be affected by, the EWA.

No Scale

Figure 1-1
EWA Area

The CALFED ROD (CALFED 2000b; Appendix A) and the EWA Operating Principles Agreement (CALFED 2000c; Appendix C) gave five Federal and State agencies the responsibility for implementing an EWA. All five "EWA agencies" cooperate in day-to-day operational management of EWA assets to best benefit fish at no uncompensated water costs to the water users. Of these five agencies, the three "Management Agencies," —the U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NOAA Fisheries), and the California Department of Fish and Game (CDFG) —have primary responsibility for exercising biological judgment to recommend which SWP/CVP operational changes would be beneficial to the Bay-Delta ecosystem or the long-term survival of fish species, including those fish species listed under the State and Federal Endangered Species Acts (CESA and ESA, respectively). The Bureau of Reclamation (Reclamation) and the California Department of Water Resources (DWR), the two "Project Agencies," cooperate with the Management Agencies in administering the EWA by acquiring, transferring, selling, borrowing, banking, and conveying EWA water assets and by implementing the recommended SWP/CVP operational changes proposed by the Management Agencies. All five EWA agencies manage the EWA "assets" and make day-to-day operational decisions on a real-time basis rather than by using a purely prescriptive approach. The EWA is based on the concept that flexible management of water will achieve fishery and ecosystem benefits more efficiently and to a greater degree than a completely prescriptive regulatory approach. EWA is dependent on monitoring and real-time water diversion management.

1.1 History of the CALFED Bay-Delta Program

The CALFED Bay-Delta Program is a collaborative effort of 23 Federal and State agencies to improve water supplies in California and the health of the Bay-Delta watershed, shown on Figure 1-2[1]. The CALFED Program was established in 1994 as a collaborative effort involving

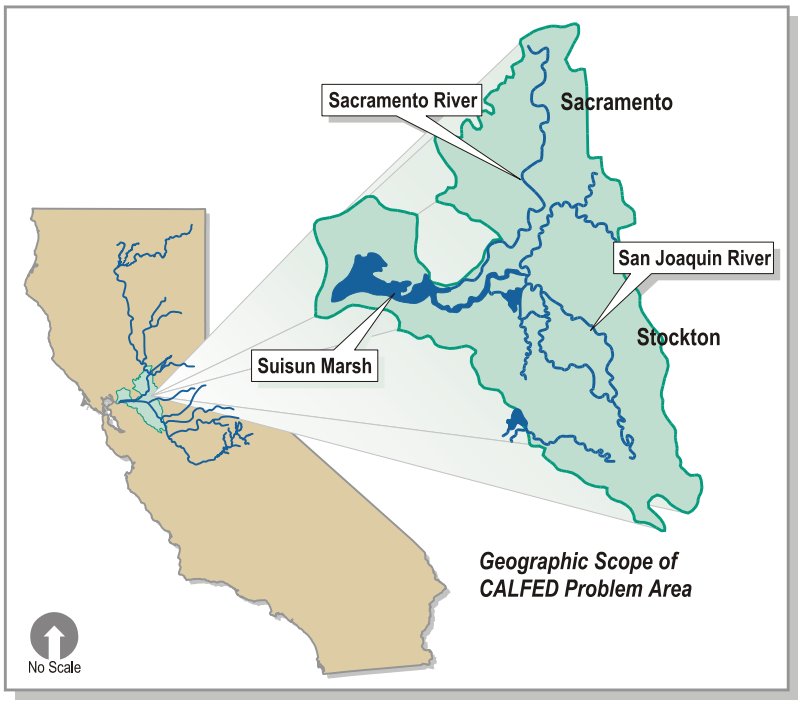

Figure 1-2
CALFED Problem Area

[1] The CALFED solution area includes the broader Bay-Delta watershed and areas that receive Bay-Delta supplies. The solution area is discussed in more detail in Chapter 3.

Federal and State agencies focused on restoring the ecological health of the Bay-Delta estuary while ensuring water quality improvements and water supply reliability to all users of Bay-Delta water resources.

The CALFED Program began with the Framework Agreement, which was signed in June 1994. This agreement stated that agencies with management and regulatory responsibility for the Bay-Delta estuary would work together to address three areas of Bay-Delta management:

- Water quality standards formulation;
- Coordination of SWP and CVP operations with existing ESA and Clean Water Act (CWA) regulatory requirements; and
- Long-term solutions to problems in the Bay-Delta estuary.

The CALFED Program is charged with responsibility for the third issue identified in the Framework Agreement. The CALFED Program long-term planning effort that was conducted by the many agencies comprising the program, included intensive stakeholder involvement to develop a comprehensive and balanced plan to address problems in four interrelated resource areas: ecosystem quality, water quality, levee system integrity, and water supply reliability. The CALFED agencies and the public developed four primary objectives for the CALFED plan:

- **Ecosystem Quality** – Improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species.
- **Water Supply** – Reduce the mismatch between Bay-Delta water supplies and the current and projected beneficial uses dependent on the Bay-Delta system.
- **Water Quality** – Provide good water quality for all beneficial uses.
- **Vulnerability of Delta Functions** – Reduce the risk to land use and associated economic activities, water supply, infrastructure, and the ecosystem from catastrophic breaching of levees (CALFED 2002a).

Six solution principles guided development of the comprehensive plan and the refinement of programmatic alternatives (CALFED 2002a). These solution principles state that any CALFED Program solution must be affordable, equitable, implementable, durable, reduce conflicts in the system, and have no significant redirected impacts.

To practicably achieve its mission, the CALFED plan will concurrently and comprehensively address problems of the Bay-Delta system within each of four resource categories: ecosystem quality, water quality, water supply reliability, and levee system integrity. Important physical, ecological, and socioeconomic links exist

between the problems and possible solutions in each of these categories. Accordingly, a solution to problems in one resource category cannot be pursued without addressing problems in other resource categories. The CALFED plan includes a range of balanced actions that can be taken forward to a comprehensive, multi-agency approach to managing Bay-Delta resources. The plan has established eight program elements; the goals of each element are listed below.

- **Ecosystem Restoration Program (ERP)** – improve and increase aquatic and terrestrial habitats and improve the ecological functions in the Bay-Delta system to support sustainable populations of diverse and valuable plant and animal species.

- **Water Quality Program** – achieve continuous improvement in the quality of the waters of the Bay-Delta system to minimize ecological, drinking water, and other water quality problems.

- **Levee System Integrity Program** – improve levee stability to benefit all users of Delta water and land.

- **Water Use Efficiency Program** – assure efficient use of existing and any new water supplies developed by the Program.

- **Water Transfer Program** – facilitate water transfers and further develop a statewide water transfer market.

- **Watershed Program** – provide financial and technical assistance to local watershed programs that benefit the Bay-Delta system.

- **Storage** – use groundwater and surface water storage to improve water supply reliability, provide water for the environment at times when it is needed most, provide flows timed to maintain water quality, and protect levees through coordinated operation with existing flood control structures.

- **Conveyance** – improve through-Delta conveyance to improve water supply reliability, protect and improve Delta water quality, improve ecosystem health, and reduce risk of supply disruption due to catastrophic breaching of levees.

Several program elements are discussed in greater detail in Section 1.3.

The CALFED Program has a phased planning and implementation approach:

- **Phase I –** CALFED agencies and stakeholders considered hundreds of potential actions and combined these actions into alternatives to meet the objectives and solution principles of the program. Phase I concluded in September 1996, with the development of a range of alternatives for achieving long-term solutions to the problems of the Bay-Delta estuary.

- **Phase II –** CALFED agencies performed a programmatic environmental review of the alternatives and released a draft CALFED PEIS/EIR and interim Phase II Report identifying three draft alternatives and program plans on March 16, 1998. Phase II culminated in the August 28, 2000, final CALFED PEIS/EIR and CALFED ROD. (See Section 1.5.1).

- **Phase III –** the CALFED Program is currently in Phase III, in which the CALFED agencies are implementing the preferred alternative defined in the CALFED PEIS/EIR and CALFED ROD. The EWA will be implemented as one of these Phase III actions.

The first 7 years of the Phase III implementation phase are referred to as Stage 1, which is intended to set forth the direction and build the foundation for long-term Phase III actions. Much of the analysis in this EWA EIS/EIR focuses on Stage 1 because potential subsequent EWA actions will likely adapt with the benefit of information learned during initial implementation of the EWA, and the EWA could change form as other CALFED Program projects are implemented.

The CALFED Bay-Delta Program is not an agency and does not implement projects such as the EWA. Although the term "CALFED" is often used as shorthand for the CALFED agencies, individually or collectively, the CALFED Program should not be confused with the agencies themselves. The program is a forum in which the agencies coordinate their activities, resolve disputes, plan, and monitor their collective progress toward resolving the Delta's problems. No Federal or State CALFED agency has delegated its authority or discretion to any other agency or to the CALFED agencies collectively. The agencies retain their discretion to make final decisions to implement elements of the CALFED Program plan according to their own independent legal authority. The fundamental notion of the CALFED Program is that the agencies can best meet their individual responsibilities by sharing information and cooperating with each other.

Senate Bill 1653 established the California Bay-Delta Authority to oversee and ensure balanced implementation of the CALFED Bay-Delta Program. The bill specifies that the Authority's governing board include six Federal agency representatives, six State agency representatives, seven public members, one member of the Bay-Delta Public Advisory Committee, and four ex officio members, namely the chairs and vice-chairs of the Senate and Assembly water committees (CALFED 2003).

1.2 EWA Program Purpose and Need and Project Objectives

The San Francisco Bay/Sacramento-San Joaquin River Delta estuary is one of the most important aquatic ecosystems in the United States, providing habitat for hundreds of plant, animal, and fish species. It also provides drinking water for two-thirds of California's populace and irrigation water for over 7 million acres of prime farmland. These competing interests – economic and ecologic, and urban and agricultural –

place a demand on the water of the Bay-Delta system that exceeds the available water supply. As water use has increased during the past several decades, conflicts have increased among the multiple users of Bay-Delta water. Heightened competition for the water during certain seasons or during low-rainfall years has magnified the conflicts.

The increasing demand for water has degraded the quality of Bay-Delta water resources for both the human and natural environments. Water demand for urban and agricultural uses has reduced water availability for ecological functions and/or has reduced the quality of aquatic habitat in the Bay-Delta system. Upstream water development, depletion of natural flows by local diverters, and the export of water from the Bay-Delta system have changed seasonal patterns of the inflow, reduced the outflow, and diminished natural variability of flows into and through the Bay-Delta system. Several Bay-Delta fish and wildlife species, some with critical life history stages that depend on adequate fresh-water flows, have been listed as endangered or threatened under the ESA and the CESA. All alternative methods for implementing the EWA need to improve the quality of the Bay-Delta aquatic ecosystem and contribute to the recovery of threatened or endangered fish species and fish species of special concern. The EWA plan should include specific actions that can quickly benefit the in-Delta, upstream, and downstream movement of larval, juvenile, and adult life stages of Bay-Delta aquatic species.

The SWP and CVP are operated by DWR and by Reclamation, respectively. The CVP delivers water primarily to agricultural and urban contractors within the Central Valley and the San Francisco Bay area. The SWP delivers water to agricultural and urban contractors in the Central Valley, the San Francisco Bay area, the central coast, and southern California. The SWP and CVP systems are both large, complex networks of water storage and conveyance facilities. (Described in more detail in Section 1.3.) DWR and Reclamation have sophisticated operation systems that move water from areas in which it is available to areas of California with more limited water resources. Both the SWP and CVP store water upstream from the Delta and move the water south of the Delta to urban and agricultural water users in the Export Service Area via large pumps in the south Delta. Water supplies pumped from the Delta are referred to as "Delta exports," or "exports." Exporting water at the Delta pumps creates another significant conflict between Bay-Delta water uses. Because exporting water from the Delta at certain times of the year (typically winter, early spring, late spring, or early summer) can entrain and kill fish, DWR and Reclamation may reduce exports at times to protect listed fish species. (Section 2.4.1 includes additional detail on export pumping and fish.) These pumping reductions protect endangered and threatened fish species, but reductions significantly decrease the reliability of the water supply to urban and agricultural users in the Export Service Area. Any alternative method for implementing the EWA program would be required to substantially reduce or eliminate the conflict at the pumps between fish protection needs and water supply reliability needs.

The conflicts between competing beneficial uses of Bay-Delta water are adversely affecting urban water users, agricultural water users, water quality, environmental quality, and harming threatened and endangered Delta-dependent species. Consequently, an effective statewide water-management program is needed almost immediately to reduce water-use conflicts. The immediate need for a solution requires all EWA alternatives to operate within existing facilities and infrastructure and comply with current laws and regulatory requirements. All stakeholders (Project Agencies, Management Agencies, and water users) agree that solutions requiring the construction of new facilities, extensive modification of existing facilities, changes in State water use, or legislative changes to existing laws or programs would require many years to authorize, plan, and implement. Any solution must be able to be implemented in the next water year.

Successful implementation of the EWA requires the flexibility to move water through the complex networks of CVP and SWP water storage and conveyance facilities in response to annual and seasonal hydrologic variation, water user needs, and the behavior of endangered species, which varies from season-to-season and year to year. The EWA must have the flexibility to respond quickly to real-time changes in fish needs and the environment, including changes in fish presence at the pumps, fish migration patterns, or water needs in area waterways for fish spawning and rearing. Similarly, the acquisition and management of water "assets" to increase water supply reliability and benefit the environment also require flexibility to be effective. The availability of supplies and willingness to sell will likely vary each year, dependent on local needs and hydrology. EWA flexibility is also needed to acquire assets when and where they are available and to maximize the amount of water that the EWA can acquire for a set budget.

1.2.1 Statement of Purpose and Need

The purpose and need for the proposed action is to: 1) provide a highly flexible, immediately implementable, water management strategy that protects the at-risk native Delta-dependent fish species affected by SWP/CVP operations and facilities, 2) contributes to the recovery of these fish species, 3) allows timely water management responses to changing environmental conditions and changing fish protection needs, 4) improves water supply reliability for water users downstream from the Delta, and 5) does not result in uncompensated water cost to the Projects' water users. This water management strategy must also be consistent with the preferred program alternative selected by the CALFED agencies in the CALFED ROD.

1.2.2 Project Objectives

The objectives for the EWA Program can be summarized as:

1. Provide protection for at-risk native fish species dependent on the Bay-Delta estuary affected by SWP/CVP operations and facilities, and to contribute to recovery of these species;

2. Allow for timely water management responses to changing environmental conditions and changing fish protection needs;

3. Improve the water supply reliability for water users in the Export Service Area by reducing conflicts at the Delta export pumps without resulting in uncompensated water costs to the Projects' water users;

4. Implement actions to accomplish the first three objectives immediately; and

5. Maximize the flexibility in operations of the SWP and CVP to most efficiently accomplish the objectives above.

1.3 The CVP and SWP

The CVP was initially authorized in the 1935 Rivers and Harbors Act, and construction began in the 1930s. Designs for the CVP were motivated by a fear of floods and drought, and a desire to transport water from the northern end of the Central Valley to the drier southern end. Today the CVP supplies irrigation water to the Sacramento and San Joaquin valleys, water to cities and industries in Sacramento and the east and south Bay Areas, and to fish hatcheries and wildlife refuges throughout the Central Valley. The CVP is operated and maintained by Reclamation and delivers approximately 7 million acre-feet of water. CVP facilities include 20 dams and reservoirs, 39 pumping plants, 2 pumping-generating plants, and 11 power plants (Reclamation 2001). Figure 1-3 shows the primary CVP facilities within the area affected by the EWA.

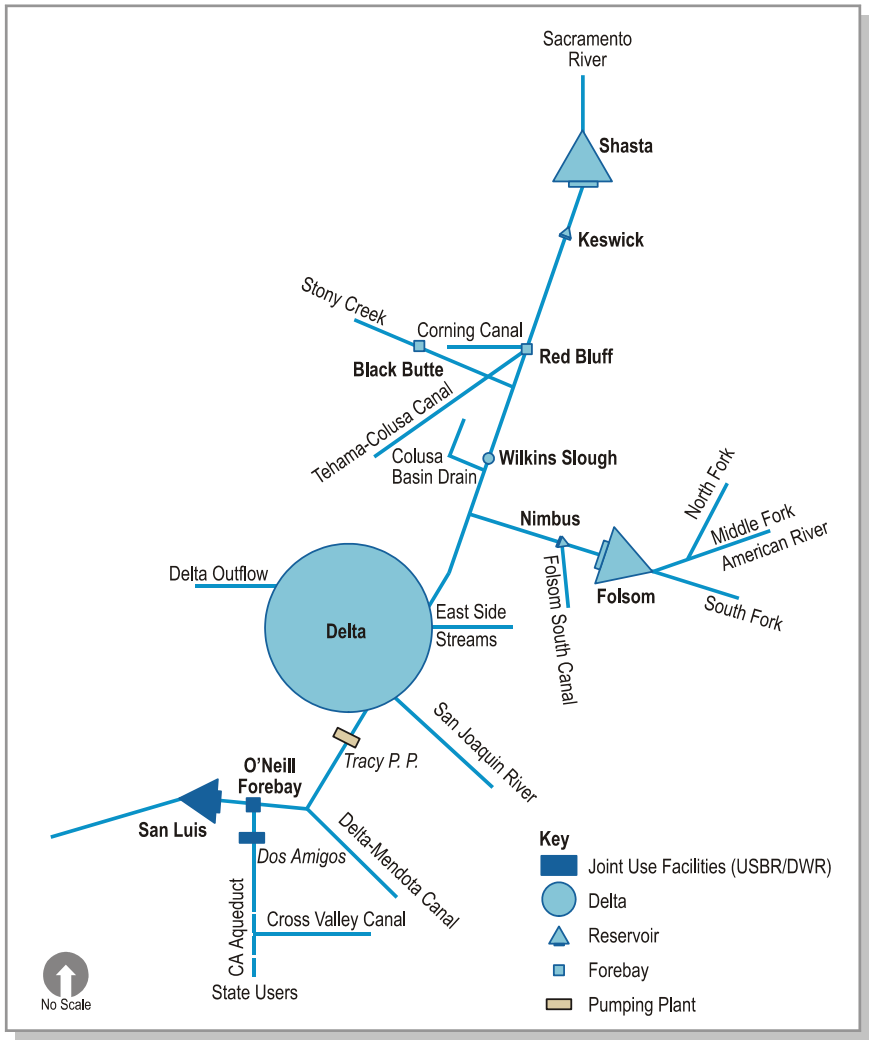

Figure 1-3
CVP Facilities Within the EWA Area

The SWP was developed to respond to an increased water need as a result of a growing population and an increase in agricultural production following World War II. The CVP could not supply enough water to meet the increasing needs, consequently the State Legislature requested that the DWR (then the Division of Water Resources) to update existing water studies. DWR produced "The California Water Plan", published in 1957, that outlined plans for water resource development including transferring water from areas of surplus in the north to areas lacking water in the south.

Today, the SWP delivers water from northern California to users in the San Francisco Bay area (North and South bay), San Joaquin Valley, and beyond to southern California. The SWP conveys an annual average of 2.5 million acre-feet of water through 17 pumping plants, 8 hydroelectric power plants, 32 storage facilities, and over 660 miles of aqueducts and pipelines. Of the contracted water supply, urban users have received 53 percent of the total water delivered over the last 20 years (DWR 2001a); the remainder is supplied for agricultural use. A total of 29 contracting agencies receive water from the SWP. Contracts specify the schedule and amount of delivery; however, the actual amount received depends on hydrologic conditions, pumping capacity in the Delta, and operational constraints such as fish protection, water quality, and legal and regulatory restrictions. Although the SWP was built primarily for water supply, it also serves Californians with recreation, flood control, fish and wildlife enhancement, power, and salinity control in the Delta. Figure 1-4 identifies SWP facilities that are within the regions affected by the EWA.

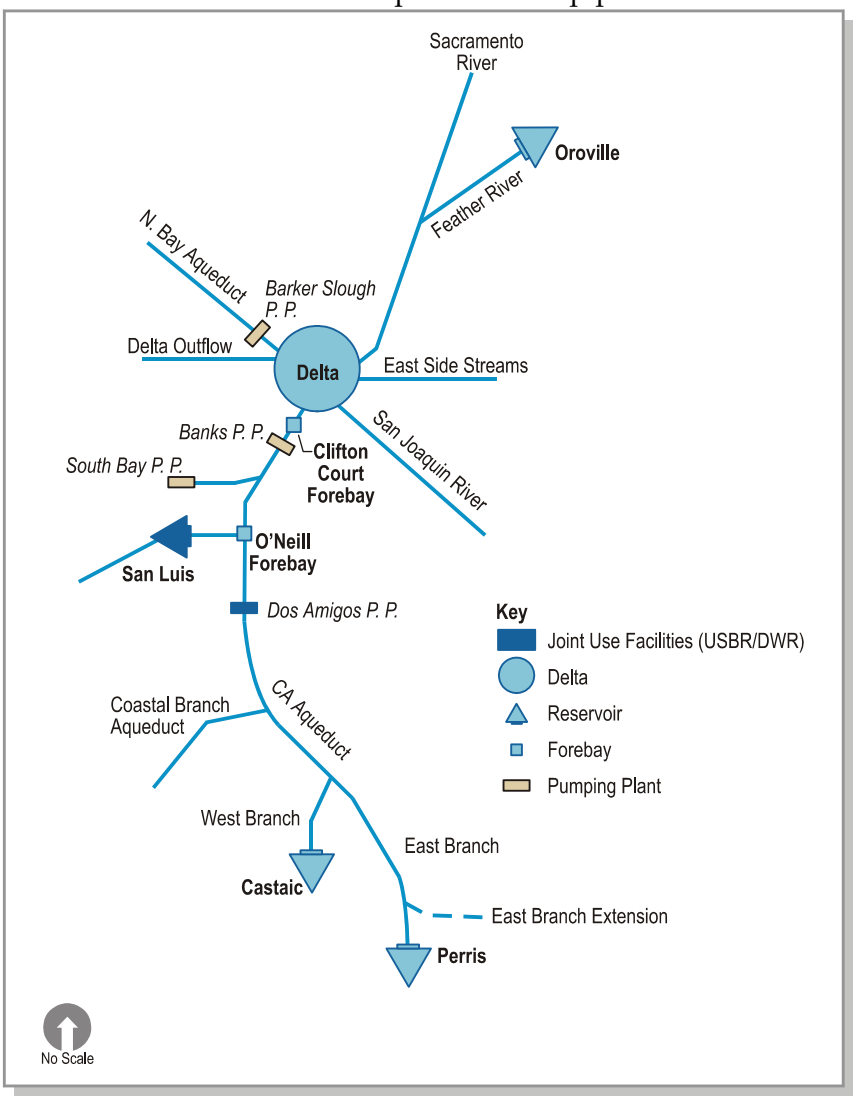

Figure 1-4
SWP Facilities Within the EWA Area

The Coordinated Operation Agreement (COA), concerning operations of the CVP and SWP, coordinates operations and establishes an accounting system to ensure that the Projects meet requirements. This agreement is discussed in more detail in Section 1.6.3.

1.4 Overview of the EWA Within the Larger CALFED Program

The EWA is just one component of the CALFED plan developed to reduce water-use conflicts in the Bay-Delta region. The CALFED PEIS/EIR and CALFED ROD (CALFED 2000b) explain all elements of the CALFED plan. The CALFED Plan elements work together as part of four broad resource management strategies that address the plan's four objectives: the Ecosystem Restoration Strategy, Levee System Improvement Strategy, Water Quality Strategy, and Water Management Strategy (CALFED 2000b). In addition, the CALFED plan incorporates a Multi-species Conservation Strategy (MSCS) for compliance with State and Federal endangered species laws, which resulted in programmatic biological opinions and Natural Community Conservation Plan (NCCP) determinations by the wildlife agencies on the overall CALFED plan. The sections below describe relevant portions of the CALFED plan and the opinions and determinations related to the plan.

The EWA is one of the water management tools in the CALFED plan that is part of the overall Water Management Strategy (CALFED 2000b). The EWA combines portions of several of the CALFED plan elements, such as water transfers, water use efficiency, conjunctive use, access to storage, access to conveyance, and flexible operations of the CVP and SWP.

The EWA Operating Principles Agreement, Attachment 2 of the CALFED ROD (CALFED 2000c), defined the EWA as a 4-year program, unless the five agencies agree in writing to extend the program. This EIS/EIR analyzes the EWA program actions through 2007, the end of Phase 1 of the CALFED Program.

1.4.1 CALFED Ecosystem Restoration Program

The CALFED Program ecosystem quality objective is to improve and increase aquatic and terrestrial habitats and improve ecological function in the Bay-Delta system to support sustainable populations of diverse and valuable plant and animal species. All CALFED plan elements will contribute in varying degrees to this objective, with the ERP being the principal plan element directed at the objective (CALFED 2000a). The ERP identifies programmatic actions throughout the Bay-Delta watershed designed to restore, rehabilitate, or maintain important ecological processes, habitats, and species within 14 ecological management zones. Prioritization and implementation of programmatic actions will be guided by the ERP Strategic Plan for Ecosystem Restoration (Strategic Plan), which includes an adaptive management approach.

The ERP will also help fulfill the mission of improving water management for beneficial uses of the Bay-Delta system. Current regulatory protections for endangered and threatened fish species require that exports of Bay-Delta water be reduced when they pose a risk to the fish species. By helping to recover currently endangered and threatened species and by maintaining viable populations of non-listed species, the ERP can help ease current diversion restrictions and avoid the need for more stringent export restrictions in the future, thereby improving the reliability of Bay-Delta water supplies.

A scientific review panel was convened in 1997 to review the three-volume ERP plan. According to the review panel, the ERP plan did not include an approach for implementation. The Strategic Plan was developed to "provide the conceptual framework and process that will guide the refinement, evaluation, prioritization, implementation, monitoring, and revision of ERP actions" (CALFED 2000[c]). The goals and objectives outlined in the Strategic Plan reflect the CALFED Ecosystem Restoration goals. ERP Strategic Goal 1 focuses on the recovery of endangered and other at-risk native species and native biotic communities. Based on this and five other goals and their associated objectives, the Strategic Plan presents a process for implementing the ERP.

The CALFED agencies have established the Environmental Water Program (EWP) to carry out the flow-related objectives within the ERP. The EWP would acquire water from willing sellers to meet these objectives. The EWP is discussed in more detail in Chapter 22, Cumulative Effects.

As the ERP moves forward to meet its goals, it will increase fish populations in area waterways. While reducing conflicts at the Delta pumps is not a primary goal of the ERP, the conflicts at the Delta export pumps would be reduced as fish recover. In the interim, the EWA would reduce water conflicts by allowing environmentally beneficial changes in the operations of the SWP and the CVP, at no uncompensated water loss to the Projects' water users.

1.4.2 CALFED Water Management Strategy

The CALFED Program objective for water supply reliability is to reduce the mismatch between Bay-Delta water supplies and current and projected beneficial uses dependent on the Bay-Delta system. As with the Ecosystem Restoration Program, all CALFED plan elements will contribute to meeting the water supply reliability objective to varying degrees. The CALFED agencies integrated all available water management tools into a Water Management Strategy with three basic purposes:

- Develop a menu of water management tools that can be used to attain the CALFED agencies' water supply reliability goals;
- Identify specific water management tools from this menu that will be implemented in Stage 1 of the CALFED Bay-Delta Program; and

- Provide a long-term decision-making framework for evaluating the success of implementation efforts and for selecting additional tools needed to achieve the objectives of the CALFED plan.

An objective of the EWA is to ensure that fish actions do not result in uncompensated loss to water users, which increases water supply reliability for these users. The EWA would therefore be one of several water management tools used to meet the water supply reliability objective. Transferring water consistent with the Water Transfer Program plan is another tool. Other tools include increasing water use efficiency, increasing water storage opportunities (both surface water and groundwater storage), and improving through-Delta conveyance. Each of these tools will also contribute to the objectives of ecosystem quality, water quality, and levee system integrity.

The CALFED Water Transfer Program Plan (The Program) presents: 1) a framework of actions, policies, and processes that collectively facilitate water transfers and 2) further develops the statewide water transfer market. The purpose of the water transfer framework is to act as a water management tool. The Program consists of solution options that protect third parties (those not directly involved in a water transfer transaction) from socioeconomic impacts; protects groundwater and surface water resources; and propose technical, operational, and administrative rules. Recommendations pertain to CALFED agencies that affect the structure and operation of the water market.

1.4.3 Multi-Species Conservation Strategy (MSCS)

The CALFED MSCS builds on the ERP to provide a framework for compliance with the ESA, CESA, and Natural Community Conservation Planning Act (NCCPA), which also concerns listed species (CALFED 2000d).

The MSCS framework identifies the habitats and species that could be affected by CALFED plan actions, analyzes how the CALFED plan actions would affect them, and proposes conservation measures that would provide for compliance with the laws covering protected species and their habitats at a programmatic level. The MSCS conservation measures build on the programmatic actions presented in the ERP.

The MSCS provides a programmatic level of species and habitat information to accompany the CALFED PEIS/EIR. This EWA-specific EIS/EIR tiers off the CALFED PEIS/EIR (see Section 1.5.1), and requires an EWA-specific level of detail for the biological analysis. The ESA Section 7 consultation (see Section 1.5.1.2 below) for the EWA program will use the CALFED MSCS to identify special status species and natural communities that might be affected by EWA actions. Because the EWA program area is larger than the MSCS focus area, the Management Agencies (USFWS, NOAA Fisheries, and CDFG) will help identify additional special status species and natural communities that may be affected specifically by the EWA program. Chapters 9 (Fisheries and Aquatic Ecosystems) and 10 (Vegetation and Wildlife) discuss ESA compliance for the EWA.

1.4.4 CALFED Programmatic Biological Opinions

Through consultations, the USFWS, NOAA Fisheries and CDFG, in coordination with the agencies taking an action (in this case the five EWA agencies), determine the effects of the proposed project on threatened and endangered species and natural communities and identify the conservation measures necessary to avoid, minimize, or mitigate these effects. The results of these processes vary depending upon the potential effects of the action. If the action agency determines in its biological assessment that its action is not likely to adversely affect a species or result in adverse modification of critical habitat, and the relevant Service concurs, consultation will be concluded. However, if the agency action is likely to adversely affect a listed species or result in adverse modification of critical habitat, a biological opinion will be prepared. A biological opinion often includes conservation measures not already proposed by the Action Agency/or Agencies. Section 1.5 describes several Federal and State consultation requirements applicable to the EWA.

The CALFED agencies used the MSCS to initiate an ESA/NCCPA[2] consultation between the CALFED agencies and the USFWS, NOAA Fisheries, and CDFG. The CALFED ROD includes the USFWS and NOAA Fisheries programmatic biological opinions that were written on the entire CALFED Program, which included an EWA. The CALFED Biological Opinions anticipated an EWA as an integral component of the entire CALFED plan that is designed to help meet ESA requirements.

The CALFED Biological Opinions included in the CALFED ROD were made at the programmatic level for the 30-year, programmatic plan referred to here as the CALFED Program. Additional Biological Opinions are required on a project-specific basis for the EWA. The EWA Action Specific Implementation Plan (ASIP, Section 1.5.1.2), tiers off the MSCS, provides more detail and will be used to initiate consultation between the EWA agencies and USFWS, NOAA Fisheries, and CDFG on the EWA. If required, the EWA ROD will include Biological Opinions written by the USFWS and NOAA Fisheries.

1.4.5 CALFED NCCPA Compliance

The NCCPA requires the preparation of a NCCP. (Section 1.5.2.3 describes the elements in an NCCP.) Consultation with CDFG results in an NCCP Determination, which makes conclusions regarding the adequacy of the proposed NCCP are presented. The CALFED ROD includes the Determination written by CDFG for the CALFED plan; CDFG concluded that the MSCS is an adequate NCCP for the CALFED plan.

The CALFED NCCP Determination included in the CALFED ROD was made at the programmatic level for the 30-year, programmatic plan referred to here as the CALFED Program. A new NCCP Determination is required on a project-specific basis for the EWA. The EWA Action Specific Implementation Plan (ASIP, Section 1.5.1.2) tiers off the MSCS, provides more detail and will be used to initiate consultation

[2] Section 1.5.1.2 and 1.5.2.3 describe ESA and NCCPA requirements.

between the EWA agencies and CDFG on the EWA. If required, the EWA ROD will include an EWA NCCP Determination written by CDFG.

1.4.6 Preliminary EWA Activities in Water Years 2000 and 2001

The CALFED ROD proposed an EWA for the first 4 years of Stage 1, requiring further approval to extend it beyond September 30, 2004. The EWA program began as one of the early implementation activities undertaken by the CALFED agencies. DWR began acquiring water supplies for use in EWA actions in 2000. In 2000, the EWA was implemented as a State-only project.

The first 2 years of the EWA interim operations were completed in 2001 and 2002 under a series of agreements executed by the Project Agencies to provide the required water for the EWA. Each of these agreements was consistent with applicable State and Federal laws, policies, and procedures. All of these actions facilitated by these agreements or taken by the Project Agencies for the EWA had independent utility. A National Environmental Policy Act (NEPA) and/or California Environmental Quality Act (CEQA) document was prepared for each water acquisition by the acquiring agency unless the action was categorically excluded from NEPA or categorically exempt from CEQA. Documentation of the agreements and EWA activities in the first 2 years can be found on the CALFED website at: http://wwwoco.water.ca.gov/calfedops/2001ops.html and http://wwwoco.water.ca.gov/calfedops/2002ops.html.

1.5 Federal and State Legal Requirements

The EWA program must fulfill or comply with the Federal, State, regional, and local environmental requirements described below.

1.5.1 Federal Requirements

1.5.1.1 National Environmental Policy Act

NEPA (42 USC 4321; 40 CFR 1500.1) applies to all Federal agencies and to most of the activities they manage, regulate, or fund that affect the environment. It requires all agencies to disclose and consider the environmental implications of their proposed actions. NEPA establishes environmental policies, provides an interdisciplinary framework for preventing environmental damage, and contains "action-forcing" procedures to ensure that Federal agency decision-makers take environmental factors into account.

NEPA requires the preparation of an appropriate document to ensure that Federal agencies accomplish the law's purposes. The President's Council on Environmental Quality (CEQ) has adopted regulations and other guidance, including detailed procedures that Federal agencies must follow to implement NEPA. CEQ regulations Section 1506.6 includes provisions for public involvement. Agency pursuit of public involvement may include:

- Providing public notice of NEPA-related hearings, public meetings, and the availability of environmental documents;
- Holding or sponsoring public hearings or public meetings;
- Soliciting appropriate information from the public;
- Explaining in its procedures where interested persons can get information or status reports on EIS' and other elements of the NEPA process; and
- Making EIS', the comments received, and any underlying documents available to the public pursuant to the provisions of the Freedom of Information Act (5 U.S.C. 552).

Reclamation and associated Cooperating Agencies will use this EIS/EIR to comply with CEQ regulations and document NEPA compliance.

1.5.1.2 Federal Endangered Species Act

The ESA requires that both USFWS and NOAA Fisheries maintain lists of threatened species and endangered species. "Endangered species" are defined as "any species which is in danger of extinction throughout all or a significant portion of its range"; "threatened species" are defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" (16 U.S.C.A. §1532). Section 9 of the ESA makes it illegal to "take" (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct) any endangered species of fish or wildlife and most threatened species of fish or wildlife (16 U.S.C.A. §1538). Section 7 of the ESA requires that Federal agencies consult with the USFWS on any actions that may destroy or adversely modify critical habitat. Critical habitat is defined as the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Act, upon a determination by the Secretary that such areas are essential for the conservation of the species (16 U.S.C.A. §1532). NOAA Fisheries's jurisdiction under the ESA is limited to the protection of marine mammals and fishes and anadromous fishes; all other species are within the USFWS' jurisdiction.

Section 7 of the ESA requires that all Federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of habitat critical to such species' survival. To ensure against jeopardy, each Federal agency must consult with the USFWS or NOAA Fisheries, or both, regarding Federal agency actions. The consultation is initiated when the Federal agency determines that its action may affect

a listed species and submits a written request for initiation to the USFWS or NOAA Fisheries, along with the agency's biological assessment of its proposed action. If the USFWS or NOAA Fisheries concurs with the action agency that the action is not likely to adversely affect a listed species, the action may be carried forward without further review under the ESA. Otherwise, the USFWS or NOAA Fisheries, or both, must prepare a written biological opinion describing how the agency action will affect the listed species and its critical habitat.

The MSCS served as the program-level biological assessment of the CALFED Bay-Delta Program's Preferred Program Alternative in the PEIS/EIR for purposes of initiating consultations with the USFWS and NOAA Fisheries under Section 7 of ESA. Based on the MSCS, the PEIS/EIR and other CALFED program-level documents, the USFWS prepared the "Programmatic Biological Opinion on the CALFED Bay-Delta Program (the USFWS PBO)[3]," dated August 28, 2000 and NOAA Fisheries prepared the "CALFED Bay-Delta Program Programmatic Biological Opinion (the NOAA Fisheries PBO)[4]," dated August 28, 2000. In the USFWS PBO and NOAA Fisheries PBO, each agency concluded that the Preferred Program Alternative will not jeopardize the continued existence of any listed species and will not adversely modify the critical habitat of any listed species. In other words, the USFWS and NOAA Fisheries concluded that at the program-level, the Preferred Program Alternative complies with Section 7 of the ESA.

The USFWS PBO and the NOAA Fisheries PBO do not authorize incidental take of any species, nor do they authorize any specific CALFED Program action. However, once specific CALFED actions have been proposed, Section 7 consultations may be initiated for the actions under the simplified regulatory compliance process established in the MSCS through the use of ASIPs.

The ASIPs will serve as the biological assessment of the EWA for purposes of compliance with Section 7 of the ESA and will discuss any endangered or threatened species that may be affected by the project.

1.5.1.3 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) establishes a management system for national marine and estuarine fishery resources. This legislation requires that all Federal agencies consult with NOAA Fisheries regarding all actions or Proposed Actions permitted, funded, or undertaken that may adversely affect "essential fish habitat." Essential fish habitat is defined as "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The legislation states that migratory routes to and from anadromous fish spawning grounds are considered essential fish habitat. The phrase "adversely affect" refers to the creation of any impact that reduces the quality or quantity of essential fish habitat. Federal activities that occur outside of an essential

[3] Attachment 6a to the Record of Decision.
[4] Attachment 6b to the Record of Decision.

fish habitat but that may, nonetheless, have an impact on essential fish habitat waters and substrate must also be considered in the consultation process. Under the Magnuson-Stevens Act, effects on habitat managed under the Pacific Salmon Fishery Management Plan must also be considered.

The Magnuson-Stevens Act states that consultation regarding essential fish habitat should be consolidated, where appropriate, with the interagency consultation, coordination, and environmental review procedures required by other Federal statutes, such as NEPA, the Fish and Wildlife Coordination Act (FWCA), the CWA, and the ESA. Essential fish habitat consultation requirements can be satisfied through concurrent environmental compliance if the lead agency provides NOAA Fisheries with timely notification of actions that may adversely affect essential fish habitat and if the notification meets requirements for essential fish habitat assessments. Reclamation and associated Cooperating Agencies will use the EIS/EIR and ASIP to comply with Magnuson-Stevens Act regulations.

1.5.1.4 Fish and Wildlife Coordination Act

The FWCA (16 USC 661 et seq.) requires Federal agencies to consult with USFWS, or, in some instances, with NOAA Fisheries and with State fish and wildlife resource agencies before undertaking or approving water projects that control or modify surface water. The purpose of this consultation is to ensure that wildlife concerns receive equal consideration water resource development projects and are coordinated with the features of these projects. The consultation is intended to promote the conservation of fish and wildlife resources by preventing their loss or damage and to provide for the development and improvement of fish and wildlife resources in connection with water projects. Federal agencies undertaking water projects are required to fully consider recommendations made by USFWS, NOAA Fisheries, and State fish and wildlife resource agencies in project reports and to include measures to reduce impacts on fish and wildlife in project plans.

The EWA agencies formed a team that met weekly or bi-weekly during the preparation of this EIS/EIR. Through USFWS, NOAA Fisheries, and CDFG participation, wildlife conservation needs were fully considered during every phase of development of the program description. When the draft EIS/EIR is issued, USFWS will provide a report for Coordination Act compliance (Appendix B) in accordance with the FWCA.

1.5.1.5 Farmland Protection Policy Act and Memoranda on Farmland Preservation

Federal agencies are required to assess the potential effects of proposed Federal actions on prime and unique farmland under the Farmland Protection Policy Act (FPPA) of 1981 and the Memoranda on Farmland Preservation, dated August 30, 1976, and August 11, 1980, respectively. Federal agencies must examine potential effects before taking any action that could result in converting designated prime or unique farmland for nonagricultural purposes. If there are potentially adverse effects on farmland preservation, the Federal agencies may consider alternative actions to

lessen those effects. To the extent practicable, Federal agencies may create programs that are compatible with State, local, and private programs to protect farmland. The Natural Resource Conservation Service is responsible for identifying prime or unique farmland that might be affected.

Implementation of the EWA would not result in the permanent conversion of any farmland; therefore, the EWA is not subject to the FPPA or the Memoranda on Farmland Preservation.

1.5.1.6 National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966, as amended, is the principal legislation that guides cultural resource management for Federal agencies. Section 106 of NHPA requires that Federal agencies take into account the effects of an undertaking on historic properties listed or eligible for listing on the National Register of Historic Places (NRHP).

The Section 106 review process is described in 36CFR800. The five steps in this process include: 1) initiation of the Section 106 process by identifying interested parties and an area of potential effect; 2) identification and evaluation of historic properties; 3) assessments of the effects of the undertaking on historic properties; 4) preparation of an agreement document to address adverse effects on historic properties; and 5) receipt from the Advisory Council on Historic Preservation (ACHP) of comments on the agreement or results of consultation. The Section 106 process requires consultation throughout each phase with the State Historic Preservation Officer, Indian tribes, and interested parties.

1.5.1.7 Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act of 1899 regulates alteration of (and prohibits unauthorized obstruction of) any navigable waters of the United States. If renewed, Section 10 of the Rivers and Harbors Act[5] limits SWP Delta operations, which influences the ability of the Project Agencies to move EWA assets from the Delta to the Export Service Area. Section 10 limits SWP diversion of water into Clifton Court Forebay to a 3-day average rate of 13,250 acre-feet per day, or an average 24-hour diversion rate of 6,680 cubic feet per second (cfs). From December 15 to March 15, when San Joaquin River flows at Vernalis are above 1,000 cfs, the permit allows a greater diversion, equal to the 3-day average of 13,250 acre-feet per day plus an additional amount equal to one-third of the total flow at Vernalis.

The U.S. Army Corps of Engineers increased the allowable 24-hour diversion rate to 7,125 cfs for the months of July, August, and September, through 2002. If renewed, this additional 500 cfs capacity provides capacity that will be available to the Project Agencies for pumping EWA assets for storage in San Luis Reservoir or for use by the

[5] U.S. Army Corps of Engineers Public Notice 5820-A permit.

Projects (CALFED 2000b). The EWA alternatives (Chapter 2) include this increased pumping capacity.

1.5.1.8 Clean Air Act

The Federal Clean Air Act (CAA) established national ambient air quality standards (NAAQS) in 1970 for six pollutants: carbon monoxide, ozone, particulate matter, nitrogen dioxide, sulfur dioxide, and lead. Areas that do not meet the ambient air quality standards are called nonattainment areas. The CAA requires states to submit a State Implementation Plan (SIP) for nonattainment areas. The U.S. Environmental Protection Agency (USEPA) reviews the SIP and must delineate how the Federal standards will be met. States that fail to submit a plan or to secure approval may be denied Federal funding and/or required to increase emission offsets for industrial expansion. The 1990 Amendments to the CAA established categories of air pollution severity for nonattainment areas, ranging from "marginal" to "extreme." SIP requirements vary, depending on the degree of severity.

The conformity provisions of the CAA are designed to ensure that Federal agencies contribute to efforts to achieve the NAAQS. USEPA has issued two regulations implementing these provisions. The general conformity regulation addresses actions of Federal agencies other than the Federal Highway Administration and the Federal Transit Administration. General conformity applies to a wide range of actions or approvals by Federal agencies. Projects are subject to general conformity if they exceed emissions thresholds set in the rule and are not specifically exempted by the regulation. Such projects are required to fully offset or mitigate the emissions caused by the action, including both direct emissions and indirect emissions over which the Federal agency has some control. The development and evaluation of the proposed action and alternatives (Chapter 2) considered CAA and SIPs.

1.5.1.9 Executive Order 12898 – Environmental Justice

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations," requires that Federal agencies identify and address any disproportionately high and adverse human health or environmental effects of Federal actions on minority and low-income populations and assure that Federal actions do not result directly or indirectly in discrimination on the basis of race, color, or national origin. Federal agencies must provide opportunities for input by affected communities into the NEPA process and must evaluate the potentially significant and adverse environmental effects of proposed actions on minority and low-income communities during environmental document preparation. Even if a proposed Federal project would not result in significant adverse impacts on minority and low-income populations, the environmental document must describe how the NEPA process addressed Executive Order 12898.

The alternative scoping process for the EWA program included affected communities. (See Section 1.7 and Chapter 19, Environmental Justice.) The EWA agencies designed the EWA alternative plans (Chapter 2) to minimize potential effects of the EWA on

minority and low-income populations. The alternatives' effects on minority and low-income populations are analyzed in Chapter 19, Environmental Justice.

1.5.1.10 Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA) is the domestic law that implements four international treaties and conventions between the U.S. and Canada, Japan, Mexico, and Russia, providing protection of migratory birds. Each of the conventions protects selected species of migratory birds that are common to both the U.S. and one or more of the other involved countries. This act makes it unlawful for any person to hunt, kill, capture, collect, possess, buy, sell, purchase, import, export, or barter any migratory bird, including the feathers, parts, nests, eggs, or migratory bird products. The MBTA does not protect the habitat of migratory birds. No EWA actions would directly or indirectly result in collection or sale of migratory birds, bird parts, or bird products; therefore, the EWA would not violate the MBTA.

1.5.1.11 Farm Security and Rural Investment Act of 2002

The Farm Security and Rural Investment Act of 2002, also known as the 2002 Farm Bill, became law in April 2002. Title II of the act includes conservation provisions designed to provide landowners with incentives and technical assistance for incorporating sound conservation practices into farming, grazing, and livestock operations. The Conservation Reserve Program is an element of this act that subsidizes farmers for idling crops. All California farmland participating in this program is included in the DWR land use surveys that were used to develop the Baseline Condition for the EWA EIS/EIR. EWA water acquisitions resulting in crop idling within the alternatives would result in an increase of total idled lands in excess of the Baseline Condition.

1.5.2 State Requirements

1.5.2.1 California Environmental Quality Act

CEQA (Public Resource Code 21000 et seq.) is regarded as the foundation of environmental law and policy in California. CEQA's primary objectives are to:

- Disclose to decision-makers and the public the significant environmental effects of proposed activities;
- Identify ways to avoid or reduce environmental damage;
- Prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures;
- Disclose to the public the reasons for agency approval of projects with significant environmental effects;
- Foster interagency coordination in the review of projects; and

- Enhance public participation in the planning process.

CEQA applies to all discretionary activities that are proposed or approved by California public agencies, including State, regional, county, and local agencies, unless an exemption applies. CEQA requires that public agencies comply with both procedural and substantive requirements. Procedural requirements include the preparation of the appropriate environmental documents, mitigation measures, alternatives, mitigation monitoring, findings, statements of overriding considerations, public notices, scoping, responses to comments, legal enforcement procedures, citizen access to the courts, notice of preparation, agency consultation, and State Clearinghouse review.

CEQA's substantive provisions require that agencies address environmental impacts, disclosed in an appropriate document. When avoiding or minimizing environmental damage is not feasible, CEQA requires that agencies prepare a written statement of the overriding considerations that resulted in approval of a project that will cause one or more significant effects on the environment. CEQA establishes a series of action-forcing procedures to ensure that agencies accomplish the purposes of the law. In addition, under the direction of CEQA, the California Resources Agency has adopted regulations, known as the State CEQA Guidelines, which provide detailed procedures that agencies must follow to implement the law.

This EIS/EIR document is intended to document EWA compliance with all relevant CEQA guidelines and CEQA requirements.

1.5.2.2 California Endangered Species Act

The CESA (Fish and Game Code Sections 2050 to 2097) is similar to the ESA. California's Fish and Game Commission is responsible for maintaining lists of threatened and endangered species under the CESA. CESA prohibits the "take" of listed and candidate (petitioned to be listed) species. "Take" under California law means to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch capture, or kill." (See California Fish and Game Code, Section 86.) Because CDFG may authorize incidental take of listed species pursuant to a CDFG approved NCCP, the EWA agencies will not require a separate incidental take permit pursuant to CESA for covered species if EWA actions adhere to MSCS goals and CDFG's NCCP Approval. (See section 1.5.2.3 below for a description of the NCCPA.)

1.5.2.3 Natural Community Conservation Planning Act

The NCCPA, California Fish and Game Code, Section 2800, et seq., was enacted to form a basis for broad-based planning to provide for effective protection and conservation of the State's wildlife heritage, while continuing to allow appropriate development and growth. The purpose of natural community conservation planning is to sustain and restore those species and their habitat identified by CDFG that are necessary to maintain the continued viability of biological communities impacted by human changes to the landscape. A NCCP identifies and provides for those measures necessary to conserve and manage natural biological diversity within the plan area

while allowing compatible use of the land. CDFG may authorize the take of any identified species, including listed and non-listed species, pursuant to Section 2835 of the NCCPA, if the conservation and management of such species is provided for in an NCCP approved by CDFG.

The MSCS was approved by CDFG as a program-level NCCP. The MSCS' project-level compliance process centers on a multi-purpose project-level environmental document called an "ASIP," which is intended to provide one format for all information necessary to initiate project-level compliance with the ESA and the NCCPA. The EWA will comply with the NCCPA through the ASIP, which contains all the necessary components of a project-level NCCP for the EWA study area.

On February 2, 2002, Governor Davis signed SB 107, which completely repealed and replaced the NCCPA with a new NCCPA. SB 107 became effective on January 1, 2003. However, in accordance with Section 2830 (c) of SB 107, the MSCS will remain in place as an approved NCCP, and CDFG may authorize take of covered species pursuant to the MSCS and CDFG's NCCP Approval.

1.5.2.4 Porter-Cologne Water Quality Control Act of 1970

In 1967, the Porter-Cologne Act established the California State Water Resources Control Board (SWRCB) and nine regional water quality control boards (RWQCBs) as the primary State agencies with regulatory authority over California water quality and appropriative surface water rights allocations. The SWRCB administers the Porter-Cologne Act, which provides the authority to establish Water Quality Control Plans (WQCPs) that are reviewed and revised periodically; the Porter-Cologne Act also provides the SWRCB with authority to establish statewide plans.

The nine RWQCBs carry out SWRCB policies and procedures throughout the State. The SWRCB and the RWQCBs also carry out sections of the Federal CWA - administered by USEPA, including the National Pollutant Discharge Elimination System permitting process for point source discharges and the CWA Section 303 water quality standards program.

WQCPs, also known as basin plans, designate beneficial uses for specific surface water and groundwater resources and establish water quality objectives to protect those uses. These plans can be developed at the SWRCB or the RWQCB level. RWQCBs issue waste discharge requirements for the major point-source waste dischargers, such as municipal wastewater treatment plants and industrial facilities. In acting on water rights applications, the SWRCB may establish terms and conditions in a permit to carry out WQCPs.

The EWA program has the potential to affect water quality in surface water or groundwater in the Central Valley region and the San Francisco Bay region, which are governed by the Central Valley RWQCB and the San Francisco Bay RWQCB, respectively. Three WQCPs (including respective amendments) developed by the

RWQCBs apply in these two regions: *WQCP for the Sacramento and San Joaquin River Basins (1998 – 4th edition); San Francisco Bay Basin WQCP (1995)*; and the *WQCP for the Tulare Lake Basin (1995 – 2nd edition)*. The basin plans are subject to a triennial review and may be amended under a structured process involving full public participation and State environmental review.

Each EWA alternative considered in this EIS/EIR complies with the water quality objectives set forth in these three basin plans. Chapter 5 of this document describes EWA water quality compliance specific to these basin plans.

1.5.2.5 Requirements of the 1995 Bay/Delta Plan Water Quality Control Plan (1995 Delta WQCP) and Decision 1641

The SWRCB adopted its WQCP for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary in May 1995 and incorporated several elements of USEPA, NOAA Fisheries, and USFWS regulatory objectives for water salinity and endangered species protection. The WQCP identifies the beneficial uses of the Bay-Delta that are to be protected and includes water quality objectives that are intended to protect the beneficial uses. The plan also includes an implementation program for achieving the water quality objectives. Under the CWA, the water quality standards comprise the uses and the quality objectives established to protect them.

Features of the current WQCP affect the EWA by requiring certain Delta outflows and by regulating actions that may be used to protect fish and benefit the environment (Section 2.4.1). Features of the WQCP that were taken into consideration during the formulation of the EWA are:

- Water-year classifications that affect outflow requirements and, consequently, export limitations.

- The Delta outflow requirements that are requirements for flow from the Delta to the San Francisco Bay. (See "Augmenting Delta Outflows" in Section 2.4.1.4.)

- Limitations on combined SWP and CVP Delta exports. Sufficient Delta outflow is provided based upon available water. Exports (that divert water from its natural course to San Francisco Bay) are limited to a percentage of the Delta inflow (that does not include rainfall). These percentages range from 35 to 45 percent from February through June, depending on the Delta inflow, and 65 percent during the remainder of the year.

The SWRCB has fully implemented the 1995 Delta WQCP objectives with new water right decisions. Decision 1641 is the water rights decision implementing the water quality standards on the San Joaquin and Mokelumne Rivers and Cache and Putah Creeks. (See discussion below.) The SWRCB issued Decision 1641 (D-1641) on December 29, 1999, revised March 15, 2000 (SWRCB 1999). D-1641 also approved a

petition to change points of diversion of the CVP and SWP in the southern Delta[6], and approved a petition to change places and purposes of use of the CVP.

The final phase of implementation focused on how water right holders in the Sacramento Valley should contribute to meeting the 1995 Delta WQCP objectives. A negotiated settlement resolved this issue by creating the Sacramento Valley Water Management Agreement (SVWMA), which is described in more detail in Chapter 23, Cumulative Effects.

1.5.2.6 Environmental Justice

State law defines environmental justice in Government Code Section 65040.12(e) as the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies. Government Code Section 65040.12(a) designates the Governor's Office of Planning and Research (OPR) as the coordinating agency in State government for environmental justice programs, and requires OPR to develop guidelines for incorporating environmental justice into general plans.

1.5.3 State and Federal Laws and Regulations Governing Water Transfers and Water Acquisitions

Both State and Federal laws contain provisions that authorize, acknowledge, or support water transfers. This section includes a description of pertinent laws that helped shape the EWA alternatives. This section describes the water rights and regulations that govern water transfers and are applicable to the EWA. Sections 1.5.3.3 and 1.5.3.4 discuss the duration and sources of potential water transfers.

1.5.3.1 Water Rights

1.5.3.1.1 Riparian Rights

Property owners with land abutting a stream, lake, or defined underground channel have a right to the use of water adjacent to or flowing by that land. These rights are known as riparian rights. Riparian rights extend only to the natural flow of the stream and allow riparian landowners to take as much water as they can reasonably and beneficially use on riparian land in the watershed of the stream. During times of water shortage, riparian right holders are obligated to share the natural flow of the stream equally with other riparian rights holders. These rights holders are also prohibited from storing water from times of water surplus for use in times of water shortage.

There is no permit requirement for riparian rights; however, riparian rights holders (with some exceptions) must file statements of water diversion and use (California Water Code [Water Code] 5100) with the State documenting their water use. This

[6] D-1641 conditionally authorized the SWP and CVP to change their diversion points by allowing each Project to use the others' facilities, known as the Joint Point of Diversion. (See Section 2.3.2.1.)

allows the State to inform the riparian rights holders when applications for upstream water use are received.

Because riparian rights are attached to land, water that may be diverted under a riparian right cannot be transferred to others. Others can, however, appropriate water not taken under riparian rights.

The alternatives described in Chapter 2 were developed to comply with all laws regarding riparian rights.

1.5.3.1.2 Appropriative Rights to Surface Water

Appropriative water rights are based on beneficial use. Appropriative rights allow use of the flow of a stream on land that does not directly abut the waterway. Appropriative rights may be used both for storage and directly applied, beneficial use. Unlike riparian right holders, who share in the natural flow of the system, priority among appropriative right holders is based upon the "first in time, first in right" doctrine. During periods of reduced flows on a waterway, senior water rights have priority, and junior right holders must reduce or cease water use if necessary.

Appropriative rights are divided into two categories: Pre-1914 and Post-1914 (or Modern) appropriative rights. Pre-1914 appropriative rights are not under any statewide permitting authority, and right holders need not give notice or request permission to change the purpose of use, place of use, or points of diversion. If such change could be construed as initiation of a new right; however, a new appropriative right would be required for the diversion and use of the water. Such changes must also not injure any users of water. (See upcoming discussion on Water Code Section 1706.) In contrast, Modern appropriative rights are subject to an administrative process that issues water right permits and licenses. Water users obtain Modern appropriative rights by applying to the SWRCB. Any changes to Modern appropriative rights must first go through a public notification and petition and approval process.

The alternatives described in Chapter 2 were developed to comply with all laws regarding appropriative rights.

1.5.3.1.3 Other Rights and Protections

Many water users such as the SWP and CVP contractors have a right to use water through contract with the holder of a water right.

Several other types of water rights exist, including Federal reserved rights and Pueblo rights. These rights typically attach to the land from which they are derived and are not a major factor in water transfers in California.

Water Code sections 1010, 1011, 1011.5, 1244, 1440, 1731, 1737, and 1745.07 provide protection to water rights holders who transfer water. Water rights can be lost through non-use for a stated period of time, subject to notice and opportunity for hearing requirements; however, if the non-use of water is due to water conservation,

use of recycled water, or participation in a conjunctive groundwater use program, the rights can be protected under Water Code sections 1010 and 1011.

The alternatives presented in Chapter 2 were developed to comply with these rights and protections.

1.5.3.2 Related Concepts in the Water Code

Both State and Federal law contain provisions that authorize, acknowledge, or support water transfers. The Water Code protects legal users of water and fish and wildlife during water transfers through the "no injury rule," analyses of impacts to fish and wildlife, evaluation of third-party impacts, and the 1707 process. The sections below discuss these protections.

1.5.3.2.1 No Injury Rule

A change in a water right may not cause injury to any legal user of the water involved. This condition applies to Modern water rights through Section 1702 of the Water Code and applies to pre-1914 water rights through Section 1706 of the Water Code. The SWRCB supervises changes to post-1914 water rights, and the courts have jurisdiction over potential violations of Section 1706. Actions included in the alternatives presented in Chapter 2 comply with the No-Injury Rule.

1.5.3.2.2 Effects on Fish and Wildlife

Water Code Sections 1435, 1725, and 1736 require that the SWRCB make a finding that certain proposed transfers not result in unreasonable effects on fish and wildlife or other instream beneficial uses. These Code Sections apply to specific types of water transfers (urgent, temporary, and long-term transfers) related to post-1914 water rights. Pre-1914 water rights are not subject to the permit system, although a change in use for instream flow may be permitted under Section 1707 on petition to the SWRCB. The alternatives presented in Chapter 2 were developed in compliance with these codes.

1.5.3.2.3 Third-Party Impacts

"Third parties" in the context of the EWA are any persons and resources other than the entities transferring or receiving water. Although the Water Code does not define "third party impacts," they traditionally include impacts related to downstream water rights; adjacent groundwater users; fish and wildlife; and recreation, economic, and social impacts. Most third-party impacts are evaluated under Water Code Sections that protect prior rights and fish and wildlife as discussed above. However, Water Code Sections 386 and 1810 require evaluation of other third-party impacts for some specific transfers and prohibit such transfers from affecting the overall economy of the area or county from which the water is being transferred. Water Code Section 1810 states that transferors can utilize public water conveyance facilities as long as "this use of a water conveyance facility is to be made without injuring any legal user of water and without unreasonably affecting fish, wildlife, or other instream beneficial

uses and without unreasonably affecting the overall economy or the environment of the county from which the water is being transferred."

Chapter 11, Regional and Agricultural Economics, discusses economic third party impacts of the Proposed Action and the alternative plans.

1.5.3.2.4 Section 1707

Section 1707 of the Water Code allows water rights holders, including riparian rights holders, to dedicate their rights to instream uses "for the purpose of preserving or enhancing wetlands, fish and wildlife resources, or recreation in, or on, the water." These transfers, from a consumptive use to a non-consumptive use with an identified need, may be temporary or permanent. The transfer must meet the following requirements for the SWRCB to consider approving the change in use:

- Will not increase the amount of water the person is entitled to use;
- Will not unreasonably affect any legal user of water; and
- Otherwise meets the requirements of Division 2 of the Water Code.

The petitioner can request that the water subject to transfer approval be in addition to water required for "Federal, State, or local regulatory requirements governing water quantity, water quality, instream flows, fish and wildlife, wetlands, recreation and other instream beneficial uses." If the petitioner does not submit this request to the SWRCB, then the water shall be used to meet any of the above requirements.

1.5.3.3 Duration of Transfer

Transfers may occur with short- or long-term durations.

1.5.3.3.1 Short Term

Short-term transfers are those that take place over a period of 1 year or less. Water Code Section 1725 allows expedited processing of short-term transfers of post-1914 appropriative rights. Short-term transfers under Section 1725 are limited to water that would have been used consumptively or stored absent the water transfer. Short-term transfers qualify for this expedited process because the effects are limited to 1 year, minimizing the risk of potential impacts. Transfers qualified under Section 1725 are exempt from CEQA; the Water Code relies on notice to the affected parties and findings made by the SWRCB rather than the development of environmental documents under CEQA. EWA acquisitions may include some short-term transfers that are exempt from CEQA.

Short-term transfers must not injure any legal user or unreasonably affect fish, wildlife, or instream uses. Petitioners for transfers must provide the SWRCB notification in writing of the proposed change, providing information outlining the buyer's consumptive use and other requested permit or license information, including documentation that no unreasonable effects to fish and wildlife would occur. The

petition is publicly noticed, and parties can file objections to the transfer. The SWRCB must evaluate and respond to the notification within 55 days if objections are filed.

Short-term EWA transfers proposed in Chapter 2 would comply with Water Code Section 1725.

1.5.3.3.2 Long Term

Long-term transfers are those that take place over a period of more than 1 year. Long-term transfers of water under post-1914 water rights are governed under Section 1735 of the Water Code. Long-term transfers are not limited to stored or consumptively used water. Because of the long-term nature of these transfers and their potential effects, the Water Code does not allow the expedited processing that is provided for short-term transfers. Long-term transfers under Section 1735 are subject to the requirements of CEQA and must also comply with the standard SWRCB public noticing and protest process. If valid protests to the proposed change cannot be resolved through negotiation between the parties, a hearing must be held prior to the SWRCB's decision on the requested transfer.

Long-term transfers for the EWA may have CEQA coverage through this EIS/EIR. Long-term transfers under post-1914 water rights will comply with Water Code Section 1735.

1.5.3.4 Source of Water for Transfer

The EWA would make use of transfers that could originate from surface water or stored water, the SWP, the CVP, groundwater, or conjunctive use.

1.5.3.4.1 Surface Water or Stored Water

Water Code Section 1725 allows a permittee or licensee to temporarily change a point of diversion, place of use, or purpose of use of water. The transfer must involve water that would have been used consumptively or stored in the absence of the transfer. Section 1725 defines consumptively used water as "the amount of water which has been consumed through use by evapotranspiration, has percolated underground, or has been otherwise removed from use in the downstream water supply as a result of direct diversion." Return flows (water that returns to a stream or a useable underground aquifer after being applied to land) are typically used by other users; therefore, they are generally not available for transfer because the transfer of this water could injure these downstream users. The most common ways to reduce consumptive use are to idle land, shift to less water-intensive crops, or substitute diversions to a source other than surface water (like groundwater sources). The two EWA action alternatives described in Chapter 2 include crop idling and groundwater substitution transfers. The amount of stored water dedicated to the transfer is equal to the amount of water that would have been stored in the absence of the transfer, subject to approval by the SWRCB.

Long-term transfers of surface water or stored water held under post-1914 water rights are authorized under Water Code Section 1735, and transfers of pre-1914 surface water or stored water are subject to the "no injury" rule.

1.5.3.4.2 SWP

The SWP long-term water supply contractors may sell unwanted portions of their allocated Table A amounts[7] to other SWP contractors or DWR if certain conditions are met. All annual SWP-to-SWP sales must be conducted through the turn-back water pool, which is available to contractors that have signed the Monterey Amendment to their SWP contract. Contractors can sell to the turnback pool or purchase water from this pool. Pool water that is not purchased by other contractors may be purchased by DWR (or by non-contractors if DWR does not want the water). DWR is operating the SWP according to the Monterey Amendments pending completion of the new EIR for the Monterey Amendments and termination of litigation related to the earlier EIR.

The two EWA action alternatives described in Chapter 2 include the option of purchasing stored groundwater or crop idling water from Kern County Water Agency, which is a SWP contractor. SWP contractors must comply with their SWP contracts when selling water to the EWA. Chapter 2 (Program Description) and Chapter 6 (Groundwater) present additional information on these constraints. Prior to entering into purchase contracts with SWP contractors for EWA purchases, DWR will require that contractors specify the year-acquired and origin of water offered for sale.

1.5.3.4.3 CVP

The Central Valley Project Improvement Act (CVPIA) granted the right to all individuals who receive CVP water (through contracts for water service, repayment contracts, water rights settlements, or exchange contracts) to sell this water to other parties for reasonable and beneficial purposes.

The Secretary of the DOI must approve each transfer and may not approve a transfer if it will impair the CVP's ability to meet its obligations to CVP users or to fish and wildlife. Transfers of more than 20 percent of the amount of water under contract within any controlling district require mandatory public review and the approval of the district. Transfers of CVP water must be authorized within 90 days from the date a complete transfer proposal is received by Reclamation, the reviewing agency. If Reclamation fails to make a decision within the time allotted, the transfer is deemed approved.

Reclamation issues its decision regarding potential CVP transfers in coordination with the USFWS, contingent upon the evaluation of impacts on fish and wildlife. A CVP transfer approval must be accompanied by appropriate documentation under NEPA and must be in compliance with other applicable State and Federal laws.

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[7] Table A is a component of all SWP Water Supply contracts between DWR and the SWP contractors. It specifies the amount of water that the State will make available for delivery. Under certain conditions, the State may deliver a lesser amount.

The SWRCB generally considers transfers of water under CVP water service or repayment contracts, water rights settlement contracts, or exchange contracts within the CVP place of use to be internal actions and not subject to SWRCB review. Where a water right limits the place of use to a specific watershed; however, it is anticipated that transfers of water outside the watershed would require SWRCB approval. Transfers of CVP water outside of the CVP service area require SWRCB review and approval. Transfers to non-CVP parties are allowed, although Reclamation levies an additional fee on these transfers. Transfers to CVP users for lands outside the CVP service area are limited to the average quantity of contract water delivered to the contracting district or agency during the last 3 years of normal water deliveries prior to the date of enactment of the CVPIA.

The EWA agencies considered these CVP transfer requirements during development of the EWA.

1.5.3.4.4 Groundwater

Groundwater users may drill a well and pump groundwater without a State water rights permit; however, local ordinances govern use of groundwater in some locations. Some groundwater basins, mostly in southern California, have been adjudicated, and many groundwater basins have local groundwater management plans adopted under Water Code 10750 (also known as AB 3030 for the Assembly Bill that enacted these statutes) or local ordinances that govern groundwater transfers.

The three types of transfers that involve groundwater are groundwater substitution, stored groundwater, and direct transfer. The direct transfer of groundwater out of an unmanaged groundwater basin,[8] in which groundwater is pumped directly to a user that does not overlie the groundwater basin, will not be an option under the EWA and is not discussed further.

Groundwater substitution transfers occur when users pump groundwater to meet their needs and transfer their surface water rights to a downstream user. Groundwater management plans, local ordinances, or Section 1745.10 of the Water Code may govern the replacement of surface water with groundwater. Groundwater substitution transfers are included in the EWA alternatives described in Chapter 2.

Stored groundwater is water stored underground for later use. Most commonly, the water suppliers are part of an overall groundwater management plan; however, underground storage can be a localized practice of a small set of water users. The amount of transferable water from a stored groundwater transfer is equal to the amount of banked groundwater that is taken from storage for the purpose of the transfer. Stored groundwater purchases are included in the EWA alternatives described in Chapter 2.

[8] In this instance an unmanaged groundwater basin is a groundwater basin where water is not previously stored for the purpose of sale.

From a water right perspective, the storage of surface water in a groundwater basin is equivalent to surface water stored in an aboveground reservoir. The original water rights holder stores the water and controls the eventual beneficial use of that water for which the appropriation to storage was made. Water rights of stored water are covered in permits, and the terms of groundwater storage must comply with local groundwater management plans. Purchases of stored groundwater and purchasing groundwater storage space are included in the EWA alternatives described in Chapter 2.

1.6 Other Pertinent Programs, Documents, Laws, and Agreements

1.6.1 CALFED Bay-Delta Program Programmatic EIS/EIR and ROD

This document tiers from the CALFED Bay-Delta PEIS/EIR and the CALFED ROD issued August 28, 2000 (including CEQA certification). "Tiering" of environmental documents means addressing a broad, general program in an initial programmatic environmental document, then analyzing the complete details of related "second-tier" projects in subsequent documents. The environmental documents for individual or "second-tier " projects may incorporate by reference analyses already completed in the first-tier document to address many large-scale, non-site-specific resources and issues, while focusing the second-tier analysis on new effects not previously considered. Tiering of environmental documents avoids repetitive evaluations when a first-tier analysis is sufficiently detailed.

The CALFED PEIS/EIR provides a very broad, programmatic analysis of the general effects of implementing the CALFED plan over a 30-year period, across two-thirds of the State. Because of the broad nature of the programmatic analysis in the PEIS/EIR, and the fact that the programmatic analysis was not intended to address any environmental effects for site-specific projects, the PEIS/EIR is being incorporated by reference solely for purposes of background information, to explain the context of the screening of the programmatic alternatives, and to demonstrate consistency with the overall CALFED plan. This document contains all necessary analysis of impacts of the EWA Program through 2007, including alternatives, direct and indirect impacts, cumulative impacts, secondary effects, and mitigation measures.

Specific links between this EWA EIS/EIR and the first-tier CALFED PEIS/EIR include:

- CALFED Final PEIS/EIR, main text Chapters 1, 2, and 4;
- CALFED Final PEIS/EIR, Responses to Comments Volume 1, Common Responses 1, 5, and 21;
- CALFED Final PEIS/EIR, Technical Appendices (Phase II Report, Implementation Plan, Water Transfer Program Plan, and Multi-Species Conservation Strategy);

Specific links between the EWA EIS/EIR and the CALFED ROD include:

- CALFED ROD, Chapter 2 (the Decision on pages 11-30 and the Plan for Action on pages 31-76 for background and content);
- CALFED ROD Attachment 2 (Environmental Water Account Operating Principles Agreement) (Appendix C);
- CALFED ROD Attachment 3 (Implementation Memorandum of Understanding);
- CALFED ROD Attachment 5 (Conservation Agreement Regarding Multi-Species Conservation Strategy);
- CALFED ROD Attachment 6A (Programmatic Endangered Species Act Section 7 Biological Opinions of the U.S. Fish and Wildlife Service);
- CALFED ROD Attachment 6B (Programmatic Endangered Species Act Section 7 Biological Opinion of the National Marine Fisheries Service);
- CALFED ROD Attachment 7 (Natural Community Conservation Plan Determination);
- CALFED ROD Attachment 9 (Coastal Zone Management Act Programmatic Consistency Determination).

This EWA EIS/EIR incorporates by reference the information, analyses, conclusions, and agreements contained in the aforementioned first-tier document sections in their entirety. Tiering of this EWA document fully complies with NEPA (CEQ) Regulation 1502.20 and CEQA Guidelines Section 15152, as well as the Guide to Regulatory Compliance for Implementing CALFED Actions (CALFED 2001).

The CALFED PEIS/EIR and ROD are available for review at the CALFED Bay-Delta Program, 650 Capitol Mall, 5th Floor, Sacramento, CA; the CALFED Program website - http://calwater.ca.gov/; and through the California State Library system.

1.6.1.1 EWA Operating Principles Agreement

The EWA Operating Principles Agreement (Attachment 2 of the CALFED ROD) is signed by the five participating agencies and defines the operations for the EWA. The agreement includes asset acquisition and management methods, accounting methods, fishery protection tools, clauses to prevent reductions in Project deliveries, and requirements for Science Panel review. Appendix C contains the text of this agreement. As needed, protocols have been developed to clarify the meaning of the

EWA Operating Principles Agreement and to further describe aspects of how the EWA will be managed[9].

1.6.2 CVPIA

CVPIA[10] is a Federal statute passed in 1992 with the following purposes:

> "To protect, restore, and enhance fish, wildlife, and associated habitats in the Central Valley and Trinity River basins of California; To address impacts of the Central Valley Project on fish, wildlife and associated habitats; To improve the operational flexibility of the Central Valley Project; To increase water-related benefits provided by the Central Valley Project to the State of California through expanded use of voluntary water transfers and improved water conservation; To contribute to the State of California's interim and long-term efforts to protect the San Francisco Bay/Sacramento-San Joaquin Delta Estuary; To achieve a reasonable balance among competing demands for use of Central Valley Project water, including the requirements of fish and wildlife, agricultural, municipal and industrial and power contractors."

The CVPIA changed the relative priorities of the various project purposes of the CVP by making fish and wildlife protection, as a project purpose, equal to water supply for agricultural and urban uses.

CVPIA Section 3406 (b)(2) (CVPIA[b][2]) authorized and directed the Secretary to dedicate and manage 800,000 acre-feet of CVP yield annually for the primary purpose of implementing the fish, wildlife, and habitat restoration purposes and measures authorized in CVPIA, to assist the State of California in its efforts to protect the waters of the Bay-Delta Estuary, and to help meet obligations legally imposed on the CVP under State or Federal law following the date of enactment of the CVPIA. This dedicated 800,000 acre-feet of water, known as (b)(2) water, was included as a component of the CALFED PEIS/EIR existing regulatory baseline for fishery protection conditions for environmental and fisheries protection measures. (See Section 1.5.1.2.) The CALFED ROD added an EWA program to augment the existing fisheries protection baseline measures by providing additional water for the long-term survival of fish species in the Bay-Delta system.

In 1999, the Department of Interior (DOI) established an accounting methodology for (b)(2) water that, among other things, 1) limited the quantity of (b)(2) water that would be accounted toward Federal obligations of the May 1995 Delta WQCP adopted by the SWRCB to 450,000 acre-feet; 2) allowed (b)(2) water released from

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[9] The EWA Team revises these protocols each year to incorporate lessons learned. The protocols from 2001, 2002, and 2003 are available online:
http://wwwoco.water.ca.gov/calfedops/2001ops.html
http://wwwoco.water.ca.gov/calfedops/2002ops.html and
http://wwwoco.water.ca.gov/calfedops/2003ops.html

[10] Title 34 of Public Law 102-575, the Reclamation Projects Authorization and Adjustment Act of 1992, signed October 30, 1992.

upstream reservoirs from October through January to be "reset" if hydrology refilled the reservoir by the end of January; and 3) allowed export pump reductions and upstream releases that would be accounted as (b)(2) costs to be "offset."[11]

1.6.2.1 Recent Decisions Affecting CVPIA (b)(2) Water

DOI's October 1999 policy regarding (b)(2) water in use at the time the CALFED ROD was signed was included in the CALFED ROD as part of the fisheries protection baseline assumptions. (See Section 1.5.1.2.)

The implementation of DOI's 1999 decision regarding use of (b)(2) water changed in 2001 and 2002 as a result of legal challenges of DOI's interpretation and implementation of (b)(2) use. In a series of judgments in *San Luis & Delta Mendota Water Authority, et al v. United States*, the Federal District Court for the Eastern District of California ruled that the 450,000 acre-foot cap, "offset," and "reset" were improper interpretations of Subsection 3406(b)(2). The 450,000 acre-foot cap was found to be an arbitrary limitation, and "offset" and "reset" could result in more than 800,000 acre-feet of water being used for fish and wildlife purposes. DOI has revised its decision on implementation of (b)(2), which was released to the public on May 9, 2003, and will be implemented in the 2004 water year. This revised decision is consistent with the Federal District Court's rulings[12]. Changes in implementation of (b)(2) have resulted in a change to Tier 1 as described in the CALFED ROD and may reduce the amount of variable assets available under the EWA Operating Principles.

1.6.3 CVP and SWP COA

The COA for the operations of the CVP and SWP was signed in 1986 (Reclamation and DWR 1986). The COA replaced earlier similar agreements between the United States and the State of California. The COA agreement specified how the SWP and CVP would operate to meet all Project requirements and objectives without adversely affecting the rights of other parties. The COA specifies two basic conditions for operational purposes: balanced conditions and excess conditions. Balanced water conditions occur when releases from upstream reservoirs plus unregulated flow equal the water supply needed to meet Sacramento Valley in-basin uses plus exports. During balanced water conditions, storage releases required to meet the Sacramento in-basin uses are made 75 percent from the CVP and 25 percent from the SWP. If there is unstored water available during balanced conditions, then this water is allocated 55 percent to the CVP and 45 percent to the SWP.

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[11] "Reset" and "offset" are defined in greater detail on Page 56 of the CALFED ROD (CALFED, 2000b).

[12] On June 3, 2003, the Ninth Circuit issued a Memorandum affirming in part and reversing in part the Federal District Court's decisions. The Ninth Circuit affirmed the Federal District Court on the issues of calculation of yield, the prohibition on using offset and reset, and the reuse of water released for (b)(2) purposes. The Ninth Circuit ruled that the District Court erred in concluding that DOI lacks discretion to allocate the 800,000 acre-feet among the three purposes of the statute. DOI believes that the Decision on Implementation of (b)(2) issued May 9, 2003 is consistent with the Ninth Circuit ruling.

Excess water conditions occur when the Delta inflows (combined releases from upstream reservoirs and unregulated flow) are greater than needed to meet the in-basin uses plus export. Under this condition, flow through the Delta is adequate to meet all needs and no coordinated operation between the CVP and SWP is required.

The COA does not cover all circumstances that occur in Delta operations (including water quality requirements from the 1995 Delta WQCP, biological opinions, the EWA, and others). The CVP and SWP are making accommodations for these circumstances now, but the COA will likely be renegotiated. The requirements of the COA agreement were fully considered during the development of EWA alternatives for this EIS/EIR.

1.7 Summary of Scoping Actions and the Issues of Known Controversy

Federal, State, and local agencies, and other parties have participated in the NEPA and CEQA process leading to the development of the EWA alternatives presented in this EIS/EIR. Many agencies[13] have been involved.

During July 2001, public scoping sessions on the EWA Program were held in six cities[14] across California: Sacramento, Chico, Oakland, Tracy, Bakersfield, and Los Angeles. Concerns are documented in the CALFED Environmental Water Account NEPA/CEQA Public Scoping Meeting Summary, 2001. Key issues raised during the public scoping process include:

- Tradeoffs between adverse and beneficial effects that may occur to those not directly involved in the water transfer process. Specific concerns included:
    - *Power*. Power concerns centered on potential effects of water transfers on: 1) the cost of power, 2) on-and off-peak hydropower production, 3) coordinating transfers with hydropower requirements, and 4) the effect of divestiture on the availability of water. The Western Area Power Administration (WAPA) requested to be included in the management of the EWA.
    - *Water Supply and Water Management*. Water supply concerns include: 1) the availability of water during droughts, 2) repayment of water debt during droughts, 3) potential effects of groundwater extraction on users within

[13] Agencies involved in scoping include California Resource Agencies: Department of Water Resources, Department of Fish & Game, The Reclamation Board, Delta Protection Commission, Department of Conservation, San Francisco Bay Conservation and Development Commission, California Environmental Protection Agency, State Water Resources Control Board, Department of Health Services, Department of Food and Agriculture. Department of Interior agencies include Bureau of Reclamation, Fish and Wildlife Service, Geological Survey, Bureau of Land Management, Environmental Protection Agency, Department of Agriculture Natural Resources Conservation Service and U.S. Forest Service, Department of Commerce National Marine Fisheries Service, Western Area Power Administration.

[14] Public Scoping Meetings were held in Sacramento on July 19, 2001; Chico on July 19, 2001; Oakland on July 23, 2001; Tracy on July 24, 2001; Bakersfield on July 25, 2001, and Los Angeles on July 26, 2001.

groundwater basins, 4) incorporation of water conservation into EWA, 5) potential long-term groundwater overdraft south of the Delta, and 6) municipal water supply vs. fishery needs. The South Delta Water Agency had concerns about protecting water supplies for non-Project water users in the south Delta.

- *Agricultural Land Use*. Members of the public expressed concern about California's food supply and decreased agricultural production that could result from water transfers involving crop idling.

- *Fisheries*. The public expressed concerns over protecting fisheries at the expense of agricultural production and/or municipal water supplies. Of additional concern were potential impacts on upstream fisheries due to Delta fishery protection.

- **Delta Issues.** Community members and the South Delta Water Agency expressed concern that water transfers could result in increasing seawater intrusion into fresh water aquifers and diminish the Delta's fresh water supply. Increased pumping could also cause increased Delta salinity from interaction with the Bay, resulting in adverse impacts on Delta fisheries and fishery habitat. Communities were concerned that EWA actions could increase export pumping without increasing the level of protection for water levels and quality in the south Delta. Delta agriculture also depends upon maintaining the fresh water supply and sustaining levels that allow existing irrigation systems to divert water from the levee system.

- **Groundwater.** Community members expressed concern about the interface between surface water and groundwater and the relationship with fish and wildlife. Increased groundwater pumping could draw water in from surface water bodies, which could affect fish and wildlife within those streams.

- **Lack of information to determine actual benefits and impacts of EWA.** Members of the public were concerned that baseline fishery data are not extensive; therefore, the EWA's effects on fisheries cannot be fully measured.

During public meetings and via written comments, public groups also expressed concerns regarding:

- **Project definition –** the EWA does not apply to CVP contractors other than export contractors;

- **Acquisition of assets –** additional asset acquisition strategies should be considered;

- **Management of assets –** the program definition was unclear about procedures that elevate the EWA Tier 3;

- **Integration of the EWA with CVPIA (b)(2) water –** additional explanation is needed of how these two programs would work together and how the Wanger decisions (Section 1.5.1.2) would affect the EWA;

- **Project alternatives –** desalination should be considered as an alternative;

- **Cumulative effects –** EIS/EIR should address cumulative effects of all water acquisition programs; and

- **Cost and funding – the EWA costs should be compared to benefits.**

1.8 Scope of This EIS/EIR

The CALFED ROD and the EWA Operating Principles Agreement describe the term of an EWA program as the first 4 years of Stage 1 of the CALFED Bay-Delta Program, but the program could be extended by written agreement of the participating agencies. Because it is expected that a written agreement will be reached, the impact analysis in this EIS/EIR includes all potential EWA actions that may occur from the time that the EWA ROD is signed (February 2004) through the end of the CALFED Stage 1 period, or until December 31, 2007.

The EWA Operating Principles Agreement (Appendix C) sets general operating principles for an EWA program and describes the tools available for use by an EWA program. The CALFED ROD and Operating Principles provide overall direction regarding EWA operation and establish water-asset acquisition targets, but do not identify specific willing sellers, water asset acquisition locations, consider the quantities of water that would likely be available by the sellers, or contemplate how EWA assets would be most efficiently conveyed and managed to protect and benefit fisheries. Moreover, the CALFED PEIS/EIR did not attempt to analyze any specific project at a detailed, site-specific level of review. Because these details about the EWA program were not known, and because the CALFED PEIS/EIR was not intended to analyze proposed projects at a site-specific level, the CALFED PEIS/EIR did not analyze all the potential site-specific impacts of the proposed EWA program on the natural and human environment, particularly project-specific impacts.

In addition to the No Action/No Project alternative, this EWA EIS/EIR presents two action alternatives for implementing the EWA Program, termed the Fixed Purchase Alternative and Flexible Purchase Alternative. The Fixed Purchase Alternative is based on the initial water acquisition quantities of 185,000 acre-feet specified in the CALFED ROD. The Flexible Purchase Alternative allows the EWA agencies to acquire up to 600,000 acre-feet to respond to differences in hydrology and fish behavior. Both alternatives include details on EWA asset acquisitions; potential willing sellers; water quantities available from willing sellers; conveyance, transfer, and storage; and management actions that protect and benefit fish. This EIS/EIR analyzes the direct, indirect, and cumulative effects of each EWA alternative. Within each alternative, the impacts of each type of EWA action (see Section 2.1) are analyzed separately.

1.8.1 Scope of Effects Analysis

This EIS/EIR cannot present a definitive list of all EWA acquisitions that may occur each year. The quantity of water available each year depends on the water supply conditions and the amount of water that water right holders and contract holders are willing to make available for transfer. Because this document cannot discuss all potential EWA acquisitions, it examines the acquisitions that are more likely to occur in the next several years because the sellers have indicated that they may be interested in transferring water. The program description in Chapter 2 describes likely maximum quantities of water that would be made available from these specific water agencies. The resource area analyses (Chapters 4-21) present the environmental effects of these transfers to the level of detail possible with the current information, recognizing that the EWA does not know the exact locations of some transfers (e.g., the farm fields for groundwater substitution or crop idling transfers). Within each alternative, the effects of each type of water acquisition are analyzed separately.

1.8.2 Scope of Study Area

The EIS/EIR study area includes those areas of California that could be potentially affected by the EWA because they serve as a site for EWA water asset acquisition, EWA asset conveyance, or storage. (See Figure 1-1.) The study area roughly coincides with the CALFED PEIS/EIR study area. (See Figure 3-5.) However, the EWA program study area is divided into three subareas, based on the subarea's relation to the Delta. Conveyance through the Delta is a significant constraint to EWA operation, influencing both the acquisition of assets and the effects evaluation. The effects analysis of each alternative was conducted under this regional framework because of the similarity of effects within each of the three subareas. The three subareas are defined as the land and tributaries Upstream from the Delta, the Delta, and the CVP/SWP Export Service Area. The CVP/SWP Export Service Area is defined as those lands that receive SWP and CVP water via the south Delta pumping plants, as well as reservoirs south of the Delta that are used for EWA asset management. Within the resource areas, these three subareas are further subdivided into river reaches, counties, or groundwater basins.

The actions evaluated in this EIS/EIR include two project alternatives, the Fixed Purchase Alternative and the Flexible Purchase Alternative, as well as the alternative of not implementing EWA, the No Project /No Action Alternative. Direct and indirect effects and cumulative impacts are evaluated, as appropriate, for each resource area.

1.9 Decision to be Made

Reclamation, DWR, USFWS, NOAA Fisheries, and CDFG decision-makers will use this EIS/EIR to decide on the best method for implementing the EWA based on a full understanding of the environmental consequences of each EWA alternative. Possible decision outcomes are:

- Take no action;
- Approve the EWA Fixed Purchase Alternative, which fixes purchases to the amounts described in the EWA Operating Principles Agreement without the use of functional equivalents of some actions; or
- Approve the EWA Flexible Purchase Alternative, which allows the EWA agencies to purchase the functional equivalent of the purchases described in the EWA Operating Principles Agreement and has a higher upper limit of EWA purchases (600,000 acre-feet) than the amount identified in the CALFED ROD.

1.10 Uses of the Document

In addition to the decision highlighted above, Reclamation, DWR, USFWS, NOAA Fisheries, and CDFG will use this document, in conjunction with the ASIP, as the environmental analysis for a decision on whether to continue the selected EWA alternative through 2007. The ASIP is an integral component of the EIS/EIR that provides additional information to meet the requirements of the Federal ESA, State ESA and NCCPA as described in the MSCS, and it analyzes the effects of program actions on covered species.

The Project Agencies and the Management Agencies are also expected to use this document as the environmental analysis for individual actions to implement the selected EWA alternative, including:

- Contracts for water acquisition, source shifting, or access to storage capacity (also local agencies);
- Issuance of Biological Opinions on the selected alternative;
- Issuance of NCCPA Determination on the selected alternative;
- Real-time decisions to increase upstream flows, Delta outflows, reductions/increases in pumping, consistent with existing operations rules;
- Approvals of water transfers and/or change petitions; and
- Approval of county groundwater permits for purposes of transfers (counties, where applicable).

When approving a specific water acquisition, the acquiring agency will consider whether it was analyzed on a site-specific basis in this document. If so, the agency may make a finding to that effect and rely on this document, unless there have been significant changes that would trigger the need for a supplemental document. In either case, the agency would be able to tier from the analyses provided in this EIS/EIR. If the action was not analyzed on a site-specific basis, the agency would determine whether the action is categorically exempt from CEQA categorically excluded from NEPA, or whether additional CEQA/NEPA documents are required.

It is anticipated that local agencies that must approve their own participation in an EWA transaction will use this document in the same manner. Responsible agencies and cooperating agencies, such as the SWRCB, are also expected to use this document in a similar manner for approvals they must issue for projects to implement the EWA.

1.11 Report Organization

The remaining chapters of this document are organized as follows:

- **Chapter 2 – Alternatives, Including the Proposed Action** – Chapter 2 describes two alternatives of the EWA program, plus the No Action/No Project Alternative, and explains how the EWA agencies would acquire, manage, and use assets to complete fish actions to meet the EWA's objectives.

- **Chapter 3 – Introduction to the Environmental Setting, Impacts, and Mitigation Measures** – This chapter describes the approach for describing the environmental setting and assessing environmental consequences and mitigation measures.

- **Chapter 4 – Water Supply and Water Management** – This chapter includes the affected environment/environmental setting, environmental consequences/environmental impacts, mitigation measures, and cumulative effects of the EWA program on water supply and water management.

- **Chapter 5 – Water Quality** – This chapter includes the affected environment/environmental setting, environmental consequences/environmental impacts, mitigation measures, and cumulative effects of the EWA program on water quality.

- **Chapter 6 – Groundwater Resources** – This chapter includes the affected environment/environmental setting, environmental consequences/environmental impacts, mitigation measures, and cumulative effects of the EWA program on groundwater resources.

- **Chapter 7 – Geology, Soils, and Seismicity** – This chapter includes the affected environment/environmental setting, environmental consequences/environmental impacts, mitigation measures, and cumulative effects of the EWA program on geology, soils, and seismicity.

- **Chapter 8 – Air Quality** – This chapter includes the affected environment/environmental setting, environmental consequences/environmental impacts, mitigation measures, and cumulative effects of the EWA program on air quality.

- **Chapter 9 – Fisheries and Aquatic Ecosystems** – This chapter includes the affected environment/environmental setting, environmental

consequences/environmental impacts, mitigation measures, and cumulative effects of the EWA program on fisheries and aquatic ecosystems.

- **Chapter 10 – Vegetation and Wildlife** – This chapter includes the affected environment/environmental setting, environmental consequences/environmental impacts, mitigation measures, and cumulative effects of the EWA program on vegetation and wildlife.

- **Chapter 11 – Regional and Agricultural Economics** – This chapter includes the affected environment/environmental setting, environmental effects, measures to reduce effects, and cumulative effects of the EWA program on regional and agricultural Economics.

- **Chapter 12 – Agricultural Social Issues** – This chapter includes the affected environment/environmental setting, environmental effects, measures to reduce effects, and cumulative effects of the EWA program on agricultural social issues.

- **Chapter 13 – Agricultural Land Use** – This chapter includes the affected environment/environmental setting, environmental consequences/environmental impacts, mitigation measures, and cumulative effects of the EWA program on agricultural land use.

- **Chapter 14 – Recreation Resources** – This chapter includes the affected environment/environmental setting, environmental consequences/environmental impacts, mitigation measures, and cumulative effects of the EWA program on recreation resources.

- **Chapter 15 – Flood Control** – This chapter includes the affected environment/environmental setting, environmental consequences/environmental impacts, mitigation measures, and cumulative effects of the EWA program on flood control.

- **Chapter 16 – Power Production and Energy** – This chapter includes the affected environment/environmental setting, environmental consequences/environmental impacts, mitigation measures, and cumulative effects of the EWA program on power production and energy.

- **Chapter 17 – Cultural Resources** – This chapter includes the affected environment/environmental setting, environmental consequences/environmental impacts, mitigation measures, and cumulative effects of the EWA program on cultural resources.

- **Chapter 18 – Visual Resources** – This chapter includes the affected environment/environmental setting, environmental consequences/environmental impacts, mitigation measures, and cumulative effects of the EWA program on visual resources.

- **Chapter 19 – Environmental Justice** – This chapter includes the affected environment/environmental setting, environmental effects, measures to reduce effects, and cumulative effects of the EWA program on environmental justice.

- **Chapter 20 – Indian Trust Assets** – This chapter includes the affected environment/environmental setting, environmental consequences/environmental impacts, mitigation measures, and cumulative effects of the EWA program on Indian Trust Assets.

- **Chapter 21 – Growth Inducing Impacts** – Chapter 21 provides an overall evaluation of the potential for regional growth inducement resulting from implementation of the EWA.

- **Chapter 22 – Cumulative Impacts** – Chapter 22 discusses the programs and projects that are included in the cumulative impacts analyses. The analysis of the cumulative impacts occurs within each resource area in Chapters 4 - 20.

- **Chapter 23 – Consultation and Coordination** – Chapter 23 describes the consultation and outreach activities that have occurred during the document preparation process.

- **Chapter 24 – List of Preparers**.

1.12 References

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